

REMARKS

Reconsideration of the above-identified patent application is requested in view of the remarks that follow. These remarks address the Examiner's comments in Paragraph 5 of the December 21, 2004, Advisory Action.

In the October 7, 2004, Final Rejection in this application, the Examiner rejected Applicant's claims 1-23 as unpatentable in view of the prior art. Specifically, claims 1-7 and 19-21 were rejected under 35 U.S.C. §102(b) as being anticipated by the Acheson et al. '935 patent; claims 8-10 and 22-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Acheson et al. '935 patent in view of the Muenger et al. '259 patent, and claims 11-18 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Acheson et al. '935 patent. For the reasons set forth below, Applicant traverses these rejections.

The Acheson et al. '935 patent discloses techniques for generating power based upon the in-situ heating of oil shale. In contrast, as recited in Applicant's original independent method claim 1 and in original independent system claim 19, Applicant's invention is directed to the removal of oil shale from an oil shale deposit, combustion of the removed oil shale in a burn container, and utilization of the heat generated in the burn container to generate electricity on the site of the oil shale deposit.

More specifically, original independent method claim 1, which stands rejected as anticipated by the Acheson et al. reference, recites a step of "removing oil shale from an oil shale deposit in bulk form." Original independent system claim 19 recites as an element "a burn container that receives oil shale from the oil shale deposit." Upon careful review of the Acheson et al. reference, Applicant submits that the reference neither teaches nor suggests combustion of oil shale that has been removed from an oil shale deposit, but rather discloses only the in-situ combustion of oil shale.

At column 1, lines 17-23, the Acheson et al. reference states:

"This invention relates to the recovery of the energy in gases of low heating value. It is particularly useful for the recovery of the energy in gases produced in an in-

situ combustion process for the production of oil from underground carbonaceous deposits and more particularly from underground deposits of oil and oil shale.”

At column 1, lines 25-27, the Acheson et al. reference states:

“One method for increasing the production of heavy crude oils of high viscosity from underground formations is the in-situ combustion process.”

At column 3, lines 28-31, the Summary of the Invention section of the Acheson et al. reference states:

“This invention resides in a method and apparatus for the recovery of energy from LHV gas, preferably LHV gas discharged from the production wells of in-situ combustion processes for the production of oil.”

The Description of Preferred Embodiment section of the Acheson et al. reference discloses a method and apparatus for combusting fluids produced in a production well that penetrates a subsurface formation containing crude oil. This disclosure is made with reference to Figs. 1-3 of the patent drawings.

At column 3, lines 58-62, the Brief Description of the Drawings section of the Acheson et al. reference states:

“FIG. 1 of the drawings is a diagrammatic flow sheet of a preferred embodiment of this invention as used for recovery of power from LHV gas discharged from an in-situ combustion system for the recovery of oil from an underground oil reservoir.”

At column 3, beginning at line 67, the Acheson et al. reference states:

“FIG. 3 is a chart showing the variation in the heating value of gases produced in an in-situ combustion process for the recovery of oil from an oil reservoir over a two and one-half years.”

Upon careful review, we find nothing in the Acheson et al. patent specification or drawings that either teaches or suggests that its disclosure is directed to anything other than recovery of energy from fluid generated in an in-situ combustion process.

Webster's 1913 Dictionary defines "in-situ" as follows:

"In its natural position or place; --said of a rock or fossil, when found in the situation in which it was originally formed or deposited."

In accordance with the Webster's definition, the Acheson et al. reference teaches a method in which oil shale is heated in the position in which it was originally formed or deposited. In patentable contrast, Applicant's independent method claim 1 recites a step of "removing oil shale from the oil shale deposit in bulk form." Applicant's independent system claim 19 recites "a burn container that receives oil shale from the oil shale deposit. Thus, neither claim 1 nor claim 19 is directed to an "in-situ" technique of the type taught by Acheson et al.

In the December 21, 2004, Advisory Action, the examiner stated:

"Acheson et al. must remove the oil shale deposit before receiving it."

Upon careful reconsideration of the Acheson et al. reference, it is submitted that Acheson does not disclose removal of oil shale from the oil shale deposit for combustion in a burn container, as recited in Applicant's claims. Rather, as discussed in detail above, Acheson et al. disclose "in-situ" combustion of oil shale. That is, Acheson et al. disclose, for example at column 4, lines 5-12, of the reference:

"Referring to Fig. 1 of the drawings, a subsurface formation 10 containing crude oil, usually of high density and viscosity, is penetrated by a production well 12 and an injection well 14 spaced from the production well. Fluids produced from the production well 12 are delivered through a line 16 into a separator 18 in which the produced LHV gas is separated from liquids produced through well 12."

(underlining added)

Thus, in accordance with the Acheson et al. teaching, oil shale processed while it remains in the oil shale deposit, i.e. in-situ, to produce "fluids", i.e. LHV gas and hydrocarbon liquids, that are piped from the in-situ oil shale processing location to separator and further processing.

As discussed above, Applicant's claim 1 recites a method that includes "removing oil shale from the oil shale deposit in bulk form."

Applicant's claim 19 recites a system that includes "a burn container that receives oil shale from the oil shale deposit."

Thus, Applicant's claimed invention does not involve an in-situ oil shale combustion process of the type taught by Acheson et al.

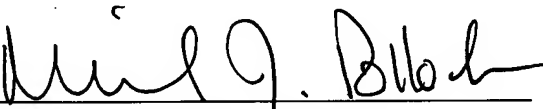
Upon consideration of the Muenger et al. reference, Applicant submits that there is nothing disclosed in this reference that would motivate a person skilled in the art to modify the Acheson et al. in-situ process to arrive at the oil shale removal based technique of the present invention.

For the reason set forth above, Applicant submits that independent method claim 1 and independent system claim 19, as originally filed, and all claims depending therefrom, patentably distinguish over the prior art. Therefore, it is requested that this application be passed to allowance.

Respectfully submitted,

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